

Please cancel Claims 2-46.

Please add the following new claims:

47. (New) A flat bed platesetter system for imaging radiant energy onto a printing plate, the system comprising:
- (c) a carriage for moving the printing plate in a direction of movement over stationary supporting elements;
 - (d) at least one low inertia element connecting the printing plate and the carriage; and
 - (e) an optical head movably mounted on a stationary bridge extending across the direction of movement of the printing plate, wherein the optical head comprises emitters for emitting radiant energy onto the printing plate.
48. (New) A flat bed platesetter system for imaging radiant energy onto a printing plate, the system comprising:
- (a) an optical head movably mounted on a stationary bridge extending across a direction of movement of the printing plate; and
 - (b) a radiant energy emitting source provided at or in the optical head emitting radiant energy onto the printing plate.
49. (New) A flat bed platesetter system for imaging radiant energy onto a printing plate, the system comprising:
- (a) a carriage for moving the printing plate in a direction of movement;
 - (b) a support for supporting the flat bed platesetter system in a downwardly inclined manner with respect to the direction of movement of the printing plate; and
 - (c) an optional storing and delivery system for a plurality of printing plates having a support and delivery area which is downwardly inclined or inclinable to

feed a printing plate by gravitational force onto a support area of the flat bed platesetter.

50. (New) A flat bed platesetter system for imaging radiant energy onto a printing plate, the system comprising:

- (a) a carriage for moving the printing plate in a direction of movement;
- (b) an optical head movably mounted on a stationary bridge extending across the direction of movement of the printing plate, wherein the optical head comprises emitters for emitting radiant energy onto the printing plate; and
- (c) printing plate positioning means for bringing the printing plate into a defined position onto a support area prior to imaging, wherein a first positioning element is provided at a first lateral side, second and third positioning elements are provided at the opposite second lateral side, and at least a fourth positioning element is provided at a downstream end of the support area.

51. (New) A flat bed platesetter system for imaging radiant energy onto a printing plate, the system comprising:

- (a) a support area movably supporting the printing plate in a direction of movement;
- (b) an optical head movably mounted on a stationary bridge extending across the direction of movement of the printing plate, wherein the optical head comprises emitters for emitting radiant energy onto the printing plate; and
- (c) a drive assembly connecting the printing plate and a carriage, wherein the drive assembly comprises:
 - (i) a carriage member carrying the printing plate and optionally mounted on at least one bearing,
 - (ii) an electric linear motor driving the carriage member, and
 - (iii) an encoding system for defining the position of the printing plate along its path of movement.

52. (New) A flat bed platesetter system for imaging radiant energy onto a printing plate, the system comprising:
- (a) a carriage for moving the printing plate in a direction of movement; and
 - (b) a carriage member connecting the printing plate and the carriage, wherein the carriage member is provided in a center position of a support area supporting the printing plate.
53. (New) A flat bed platesetter system for imaging radiant energy on a printing plate, the system comprising:
- (a) an optical head movably mounted on a stationary bridge extending across a direction of movement of the printing plate; and
 - (b) a carriage for moving the printing plate in the direction of movement, wherein the carriage comprises at least one radiation intensity detector.
54. (New) The system of claim 47, further comprising bearing means for movably supporting the printing plate in the direction of movement.
55. (New) The system of claim 47, wherein the printing plate comprises a thermosensitive or photosensitive material.
56. (New) The system of claim 47, wherein the head comprises a spatial modulator illuminated by at least one laser emitter and an optic forming the image of the modulator onto the printing plate.
57. (New) The system of claim 56, wherein the head comprises at least one laser emitter.
58. (New) The system of claim 47, wherein the carriage includes a longitudinally moving element of a linear motor.
59. (New) The system of claim 47, wherein the carriage is supportingly guided by at least one element.
60. (New) The system of claim 47, wherein the carriage comprises at least one vacuum gripper holding the printing plate.

61. (New) The system of claim 47, wherein the carriage comprises a carriage member located in the middle of the width of the flat bed.
62. (New) The system of claim 47, wherein the system is inclined in the direction of movement of the printing plate.
63. (New) The system of claim 47, further comprising printing plate positioning means for bringing the printing plate into a defined and centered position prior to imaging.
64. (New) The system of claim 63, wherein the printing plate positioning means comprise at least one positioning element provided respectively laterally of a support area and at least one positioning element provided at a downstream end of the support area.
65. (New) The system of claim 64, wherein a first positioning element is provided at a first lateral side, second and third positioning elements are provided at a second lateral side, and a fourth positioning element is provided at the downstream end of the support area.
66. (New) The system of claim 64, wherein at least one of the positioning elements is movable.
67. (New) The system of claim 61, further comprising an encoding system for properly defining the position of the carriage member along its path of movement.
68. (New) The system of claim 47, further comprising printing plate squaring means to position the plate at a defined longitudinal position prior to imaging.
69. (New) The system of claim 68, in which the squaring means comprises two movable elements.
70. (New) The system of claim 68, in which the plate is firmly abutted against a plurality of positioning elements by a friction pushing mechanism.
71. (New) The system of claim 47, in which a plurality of low-friction elements are arranged to form a supporting surface extending the length of the platesetter.

72. (New) The system of claim 49, wherein the support comprises a supporting surface divided into a loading zone to receive plates to be imaged, an imaging zone where plates are subjected to radiant energy and imaged, and an ejection zone to receive the imaged plates.
73. (New) The system of claim 72, wherein the loading zone comprises arrays of parallel, longitudinally aligned roller-bearing channels to receive and support plates.
74. (New) The system of claim 73, in which the array is disposed on each side of the path of the carriage.
75. (New) The system of claim 73, in which one of the roller-bearing channels is movable.
76. (New) The system of claim 72, in which the supporting zone includes a plurality of rows of bearings inserted in solid plates.
77. (New) The system of claim 76, in which a plurality of rows of pressure bearings maintain the plate against rows of precision bearings.
78. (New) The system of claim 77, wherein the pressure bearings are offset in relation to corresponding precision bearings to firmly maintain the plate in the focal plane of an imaging lens.
79. (New) The system of claim 47, wherein the carrier is provided with a radiation intensity detector.
80. (New) The system of claim 47, wherein the carrier is provided with a detector at its front end to detect the presence of a plate in relation to a track.
81. (New) The system of claim 47, wherein the carrier comprises a detector at its tail end to detect the presence of a plate in relation to a track on the carrier return trip.
82. (New) The system of claim 51, wherein the carrier has a base located under a supporting bed with sliding elements and a protruding section carrying suction cups at the level of the supporting plate area.

83. (New) The system of claim 47, wherein the optical head is located in a container, and a lens, an edge detector, roller bearings, a moving part of a linear motor, an encoder and connectors are all located on a first side of at least one supporting rail, and all connecting conduits are located on a second side of the rail to balance the weight of the optical head.
84. (New) The system of claim 83, wherein the optical head is attached to the linear motor at its center of gravity.
85. (New) A system for imaging radiant energy onto a printing plate, the system comprising:
- (a) at least two flat bed platesetter systems comprising:
 - (i) a carriage for moving the printing plate in a direction of movement over stationary supporting elements,
 - (ii) at least one low inertia element connecting the printing plate and the carriage, and
 - (iii) an optical head movably mounted on a stationary bridge extending across the direction of movement of the printing plate, wherein the optical head comprises emitters for emitting radiant energy onto the printing plate; and
 - (b) a transport assembly including a feed chain, an exit chain and at least two branch chains located between the feed chain and the exit chain, wherein each of the flat bed platesetter systems is located in one of the branch chains.
86. (New) The system of claim 85, wherein the transport assembly further comprises at least one additional component selected from the group consisting of a loader, a stripper, a plate processor, a bender, a stocker or combinations thereof.
87. (New) A method for imaging a printing plate with radiant energy in a flat bed platesetter, the method comprising:
- (a) providing a flat bed platesetter having a support area, wherein the platesetter comprises:

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- (i) a carriage for moving the printing plate in a direction of movement over stationary supporting elements,
- (ii) at least one low inertia element connecting the printing plate and the carriage, and
- (iii) an optical head movably mounted on a stationary bridge extending across the direction of movement of the printing plate, wherein the optical head comprises emitters for emitting radiant energy onto the printing plate;
- (b) providing a printing plate on a support area of the flat bed platesetter;
- (c) positioning the printing plate on the support area;
- (d) moving the printing plate in a first direction; and
- (e) moving a radiant energy emitting head in a second direction substantially perpendicular to the first direction to provide an image on the printing plate.
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